

Figure 1

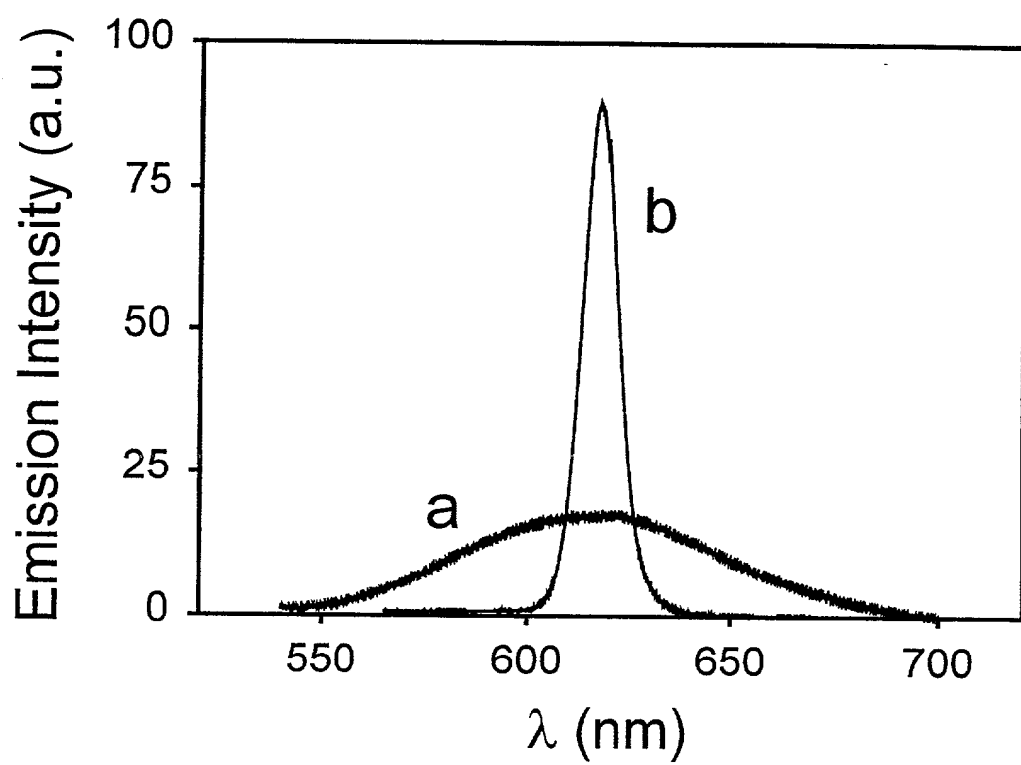


Figure 2

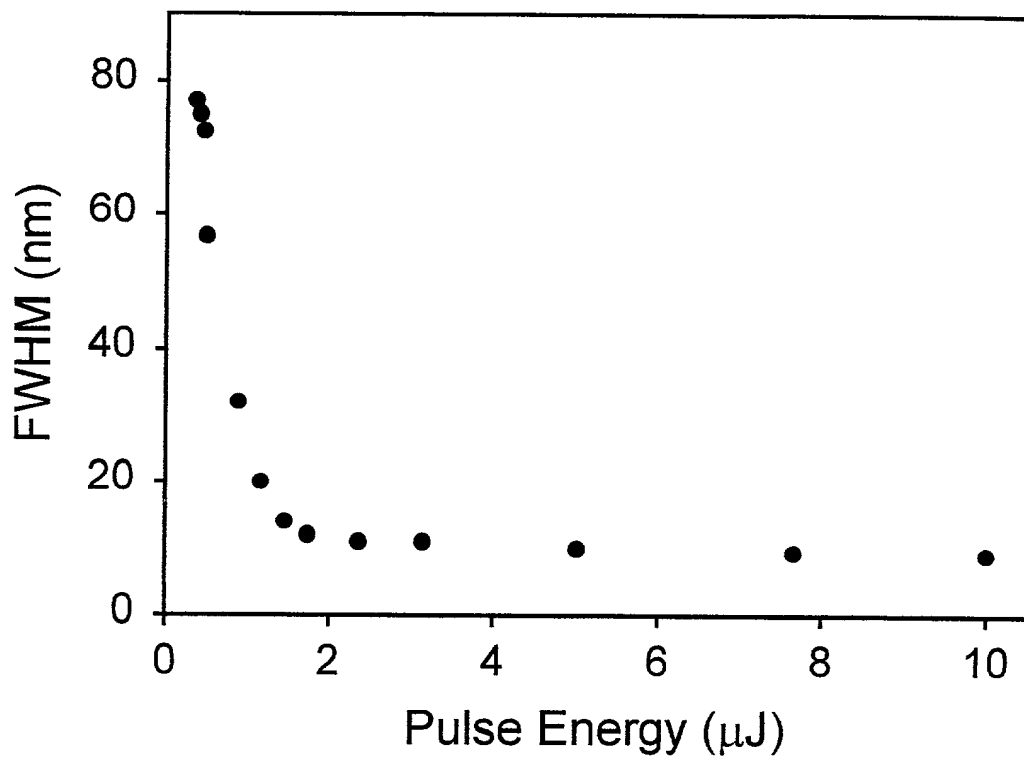


Figure 3

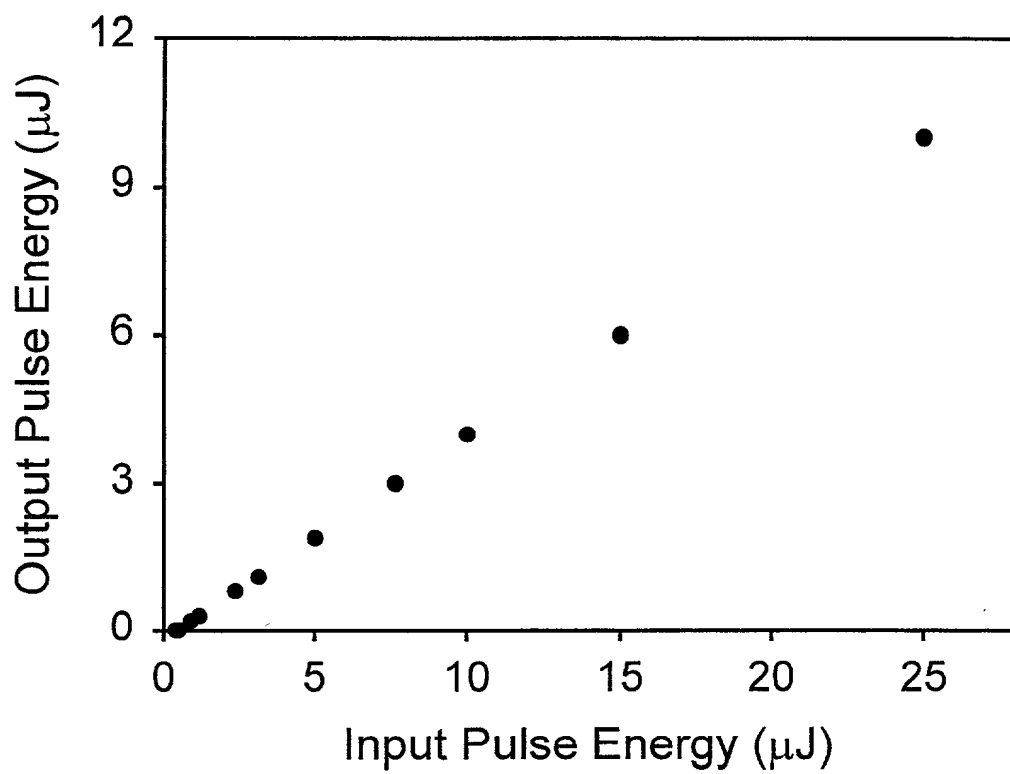


Figure 4

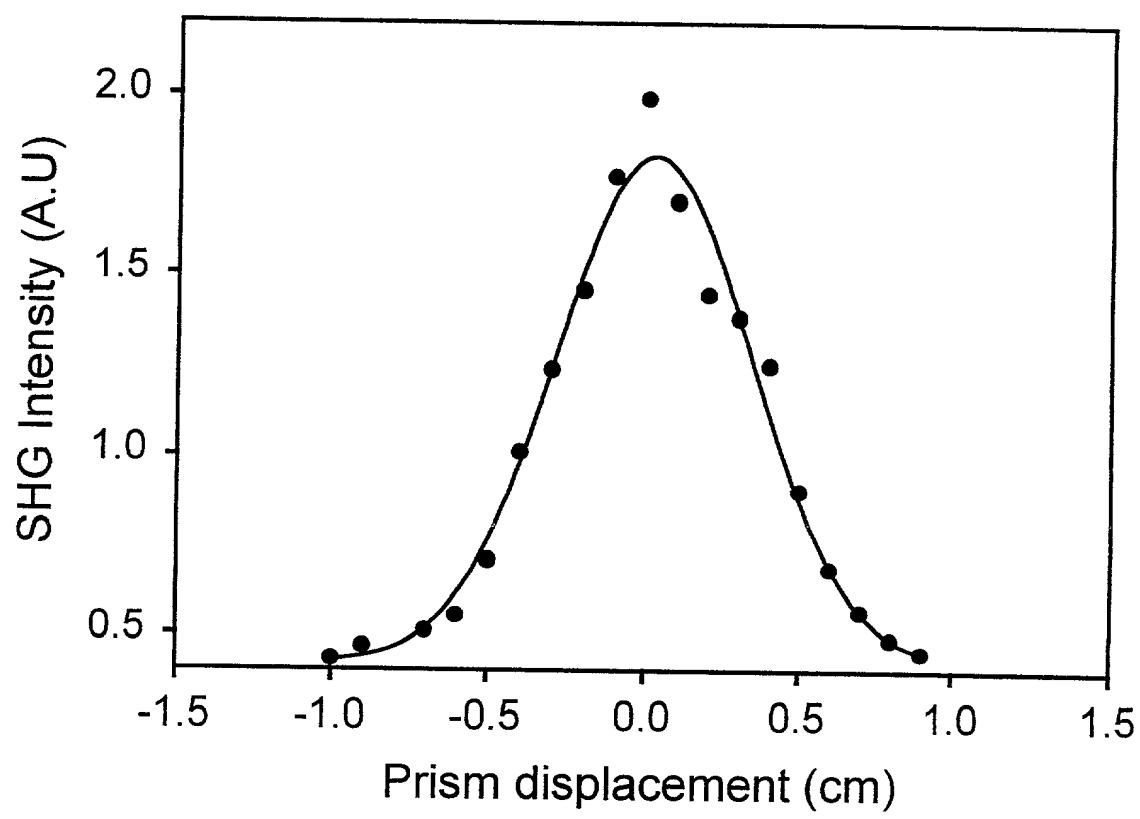


Figure 5

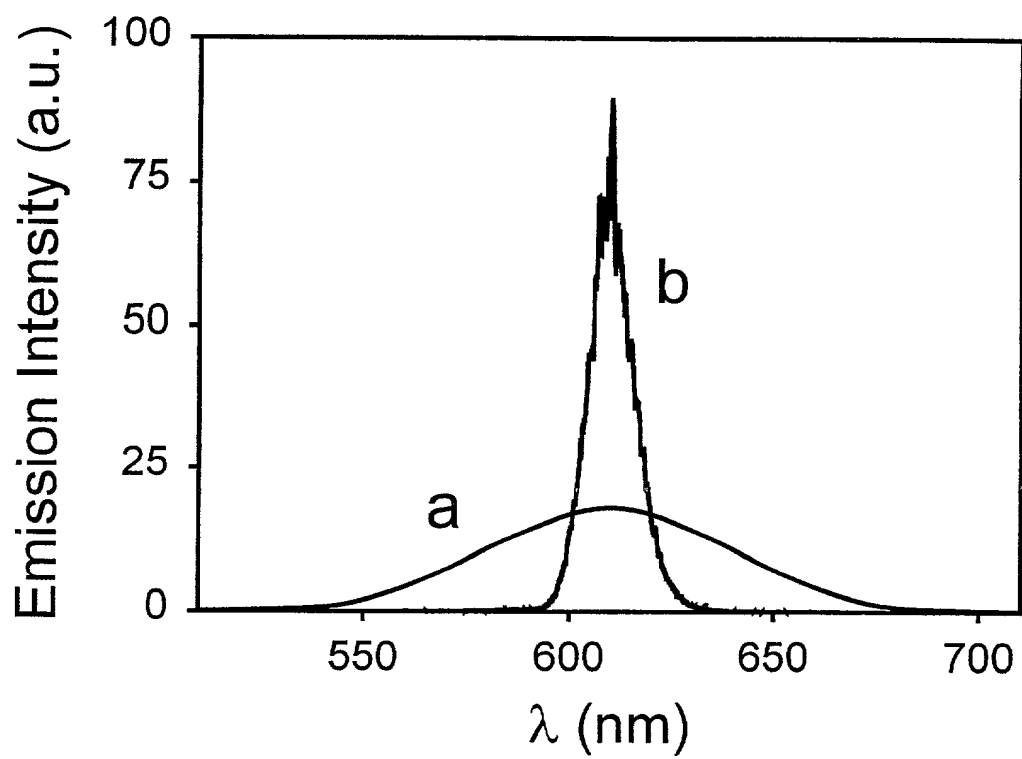


Figure 6

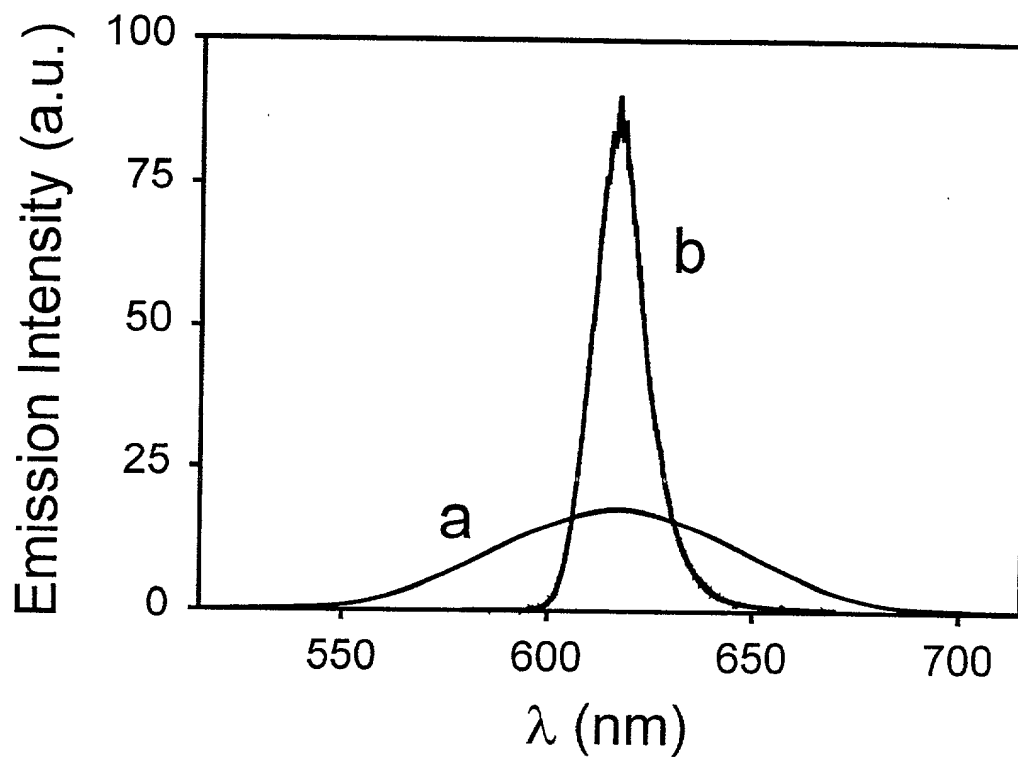


Figure 7

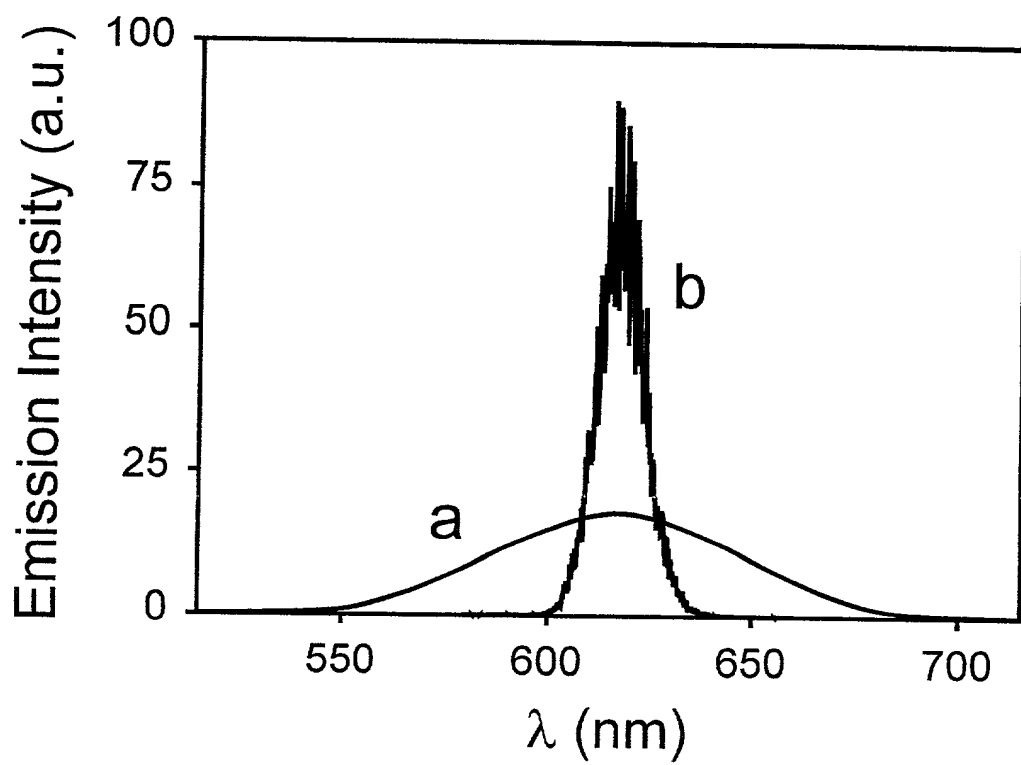


Figure 8

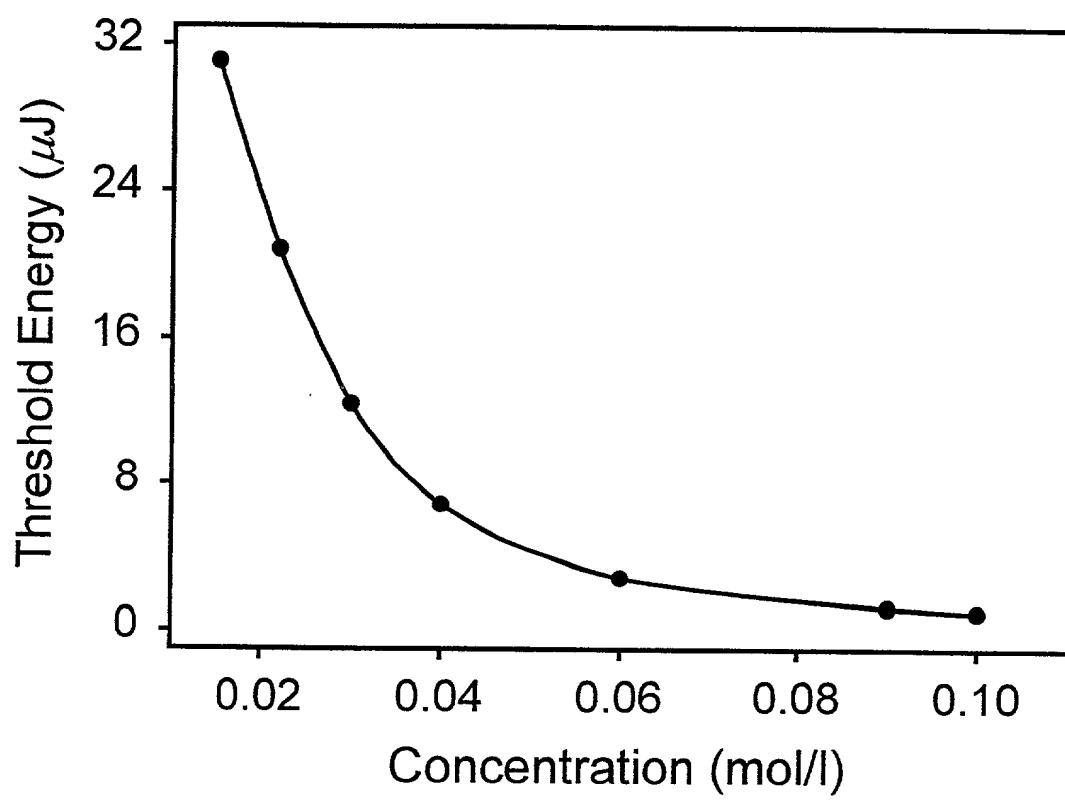


Figure 9

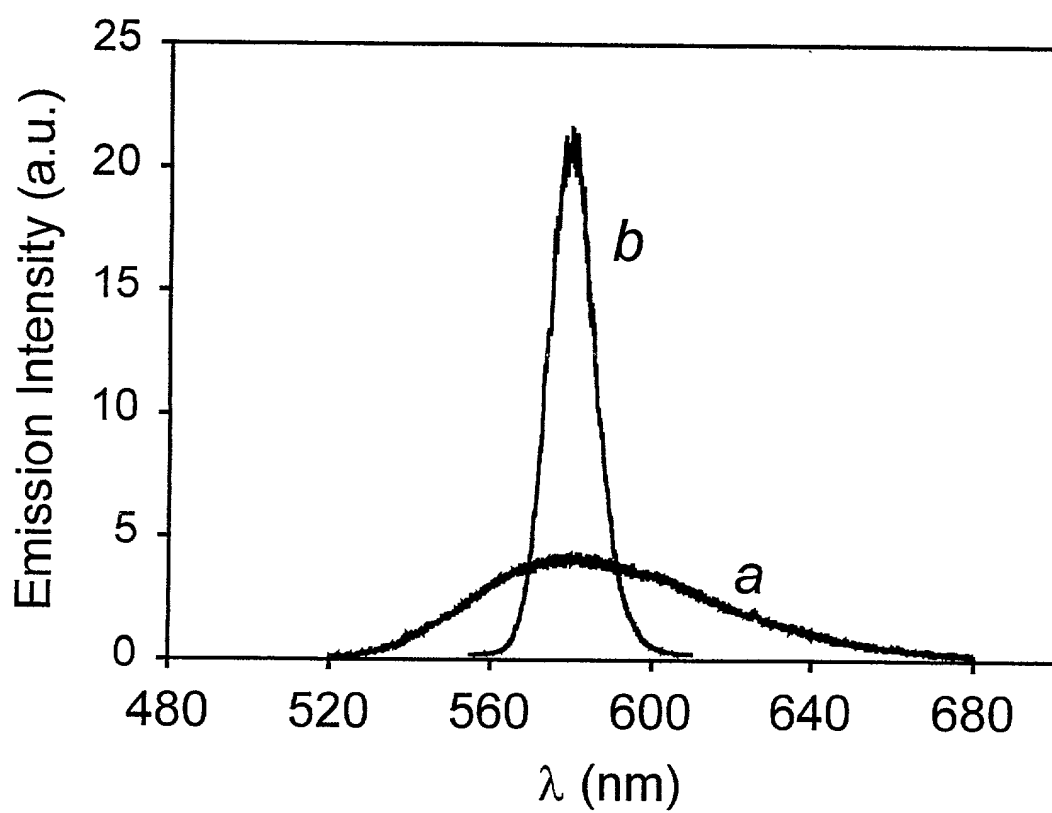


Figure 10

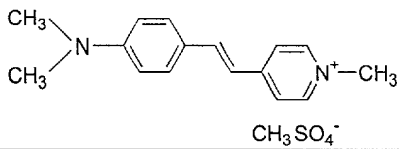
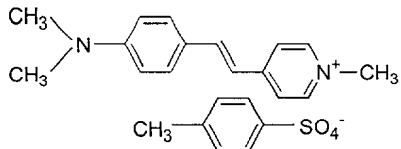
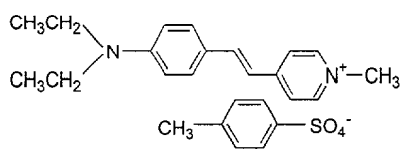
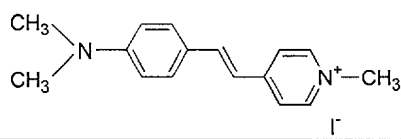
| Name | Chemical Formula |
|---|---|
| Styrylpyridinium cyanine dye (SPCD) |  <chem>CN(C)c1ccc(/C=C/c2cc[n+](C)c2)cc1.[O-]S(=O)(=O)c3ccc(C)cc3</chem> |
| 4'-dimethylamino- <i>N</i> -methyl-4-stilbazolium tosylate (DAST) |  <chem>CN(C)c1ccc(/C=C/c2cc[n+](C)c2)cc1.[O-]S(=O)(=O)c3ccc(C)cc3</chem> |
| 4'-diethylamino- <i>N</i> -methyl-4-stilbazolium tosylate (DEST) |  <chem>CCN(CC)c1ccc(/C=C/c2cc[n+](C)c2)cc1.[O-]S(=O)(=O)c3ccc(C)cc3</chem> |
| 4'-dimethylamino- <i>N</i> -methyl-4-stilbazolium iodide (DASPI) |  <chem>CN(C)c1ccc(/C=C/c2cc[n+](C)c2)cc1.[I-]</chem> |

Figure 11

| Material | Solvent | λ_{pump} (nm) | λ_{PL} (nm) | | Energy Threshold ($\mu\text{J/pulse}$) | Final Linewidth (nm) | Conversion Efficiency (%) |
|--|------------------------------|---------------------------------|-------------------------------|-------|--|----------------------------|---------------------------------|
| DTTC ^a (ref. 1) | Methanol | 694 | 798 | >50 | - | 13-18 | 3 |
| Coumarin 47 ^b (ref. 14) | Ethanol | 355 | 451 | >70 | 200 | - | 2.8 |
| Coumarin 120 ^b (ref. 14) | Ethanol | 355 | 439 | 72 | 200 | - | 2.3 |
| TOP-PPV ^b (ref. 14) | Hexane | 355 | 449 | 80-90 | 100 | 7 | 6.8 |
| MEH-PPV ^b (ref. 13) | Xylene/ CHCl ₃ | 532 | 600 | large | 180 | 7 | 0.5 |
| DCM ^a (10 ⁻³ mol/l) | Methanol | 532 | 641 | 60-70 | 8 | 10 | 25 |
| R6G ^a (10 ⁻³ mol/l) | Methanol | 532 | 570 | ~70 | 1.5 | 10 | 30 |
| SPCD ^a (0.1 mol/l) | Methanol | 532 | 620 | 0.3 | <1 | 10 | 40 |

^aMeasured without any external mirrors.

^bMeasured with an external resonator cavity.

Figure 12

| Material | Solvent | λ_{pump} (nm) | λ_{PL} (nm) | | Energy Threshold ($\mu\text{J}/\text{pulse}$) | Final Linewidth (nm) | Conversion Efficiency (%) |
|--|----------------------------|---------------------------------|-------------------------------|-----------|---|----------------------------|---------------------------------|
| DTTC ^a (ref. 1) | Methanol | 694 | 798 | >50 | - | 13-18 | 3 |
| Coumarin 47 ^b (ref. 14) | Ethanol | 355 | 451 | >70 | 200 | - | 2.8 |
| Coumarin 120 ^b (ref. 14) | Ethanol | 355 | 439 | 72 | 200 | - | 2.3 |
| TOP-PPV ^b (ref. 14) | Hexane | 355 | 449 | 80-90 | 100 | 7 | 6.8 |
| MEH-PPV ^b (ref. 13) | Xylene/ CHCl_3 | 532 | 600 | large | 180 | 7 | 0.5 |
| DCM ^a (10^{-3} mol/l) | Methanol | 532 | 641 | 60-70 | 8 | 10 | 25 |
| R6G ^a (10^{-3} mol/l) | Methanol | 532 | 570 | ~ 70 | 1.5 | 10 | 30 |
| SPCD ^a (0.1 mol/l) | Methanol | 532 | 620 | 0.3 | <1 | 10 | 40 |

^aMeasured without any external mirrors.

^bMeasured with an external resonator cavity.

Figure 13